

A Review of the Mangrove Kingfisher, *Halcyon chloris* (Boddaert) in Australia, with a Description of a New Subspecies from Western Australia

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Abstract

Two subspecies of the Mangrove Kingfisher are recognized for Australia, namely *Halcyon chloris sordida* from Kimberley (Western Australia), Northern Territory, Queensland and northern New South Wales, and *Halcyon chloris pilbara* subsp. nov. from the Pilbara, Western Australia. The new subspecies differs from *sordida* in its smaller size and duller coloration.

Introduction

The Mangrove Kingfisher (*Halcyon chloris*) is widely distributed. It extends from the Red Sea through eastern Arabia, southern Asia, the Philippines, Indonesia, Papua New Guinea, northern Australia, to Polynesia (as far as Samoa). The species undergoes much geographic variation and at present forty-seven subspecies are recognized (Peters 1960). In Australia it inhabits northern coastal mangroves, extending south to the Tweed River (northern New South Wales) on the east coast and to Exmouth Gulf on the west coast (perhaps further south in the past).

The abundant and smaller Sacred Kingfisher (*Halcyon sancta*) has often been mistaken for the Mangrove Kingfisher; hence the erroneous distribution given for the latter in many texts. Prior to 1980 there were only three acceptable records of the Mangrove Kingfisher from the Kimberley Division (Western Australia) and six from the Pilbara.

In October 1980 a detailed study of seventeen large blocks of mangal in the Pilbara region was carried out by the Department of Ornithology and Herpetology of the Western Australian Museum. Mangrove Kingfishers were observed in nine separate localities and thirteen specimens were collected. In October 1982, eight specimens were collected during a survey of the mangroves of Cambridge Gulf (north-east Kimberley) by the Department of Fisheries and Wildlife and the Western Australian Museum. These series have allowed a better understanding of geographic variation in Western Australia.

Of six specimens taken by early collectors from the Pilbara, three were from Point Cloates by T. Carter (one on 2 May 1889, one on 14 June 1900 and one on 1 May 1901). Although labelled Point Cloates, Carter used this locality in a broad sense, and there is little doubt that these specimens came from further north at Yardie Creek or perhaps Mangrove Bay.

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There has never been suitable habitat for this kingfisher at Point Cloates, and the mangal at both Yardie Creek and Mangrove Bay is now inadequate. A Mangrove Kingfisher was collected at Cossack by F.L. Whitlock on 17 October 1917. Whitlock did not identify his specimen as a Mangrove Kingfisher, and it is obvious from the literature that both he and Carter confused Mangrove and Sacred Kingfishers. However, the identity of these specimens is not in doubt as J.R. Ford (pers. comm.) has checked the two specimens collected by Carter in May, and A.R. McEvey (McKenzie 1979) has checked Carter's June specimen and Whitlock's specimen. Two immature Mangrove Kingfishers were collected by P. Montague on Hermite Island in the Monte Bello Islands in 1912. In 1955 the atomic blast destroyed the habitat there.

Materials and Methods

Sixty-two Australian specimens of the Mangrove Kingfisher held in the Western Australian Museum, Australian Museum, National Museum of Victoria, South Australian Museum, Queensland Museum, Australian National Wildlife Collection and Arid Zone Research Institute (Northern Territory) were examined. Measurements were taken as follows: length of chord of flattened wing, length of tail (along a central rectrix), length of tarsus, length of entire bill and maximum depth of bill.

Australian Subspecies

Halcyon chloris sordida Gould

Description

Adult male: Head and nape dark greenish-olive except for a hidden or partly hidden white spot on nape; loreal spot white; a broad white collar (see Figure 1) separated from head by narrow black band; back and scapulars olive-green, becoming tinged with blue on wing coverts; outer web of flight feathers blue or greenish-blue; rump and tail coverts light bluish-green; tail greenish-blue; underparts white (some specimens with faint brownish-black barring on flanks, breast and sides of throat). Iris dark brown; bill black except for base of lower mandible, which is whitish; mouth pink; legs pale brown or blue-grey.

Adult female: Differing from male in having head dark greenish-brown; back and scapulars greenish-brown; outer web of flight feathers greenish-blue; rump and tail coverts olive-green; tail light greenish-blue.

As the name implies, *sordida* is one of the dullest forms of the Mangrove Kingfisher. *Halcyon chloris chloris* is much more bluish on the head, back, wings and tail.

Distribution

Northern New South Wales, Queensland, Northern Territory and Kimberley Division of Western Australia (see Figure 2), also southern New Guinea.

Status

In New South Wales Morris, McGill and Holmes (1981) give the status as rare, possibly resident, recorded from August to February. It is seen regularly at the lower Tweed River.



Figure 1 Dorsal coloration of (left to right): male *Halcyon chloris pilbara* (A16690), female *H. c. pilbara* (A16686) and male *H. c. sordida* (A12621). Photographed by C. Bryce.

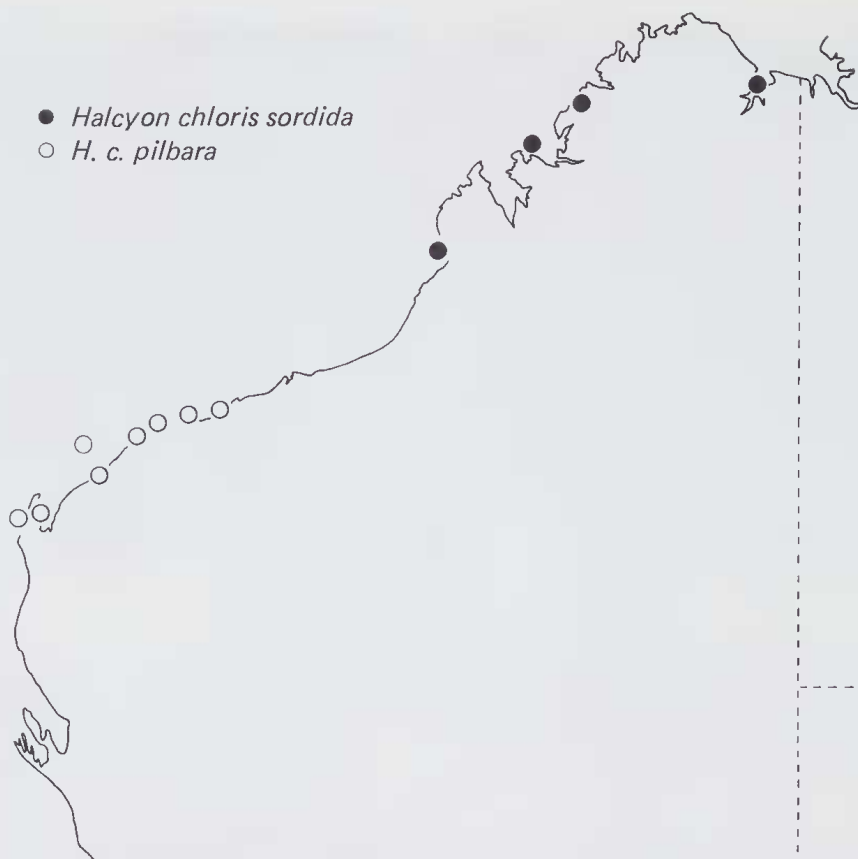


Figure 2 Map of northern Western Australia, showing the distribution of *Halcyon chloris sordida* (solid circles and *H. c. pilbara* (hollow circles).

In Queensland Storr (in press) lists it as locally common but generally uncommon and patchily distributed. In the Northern Territory Storr (1977) gives the status as moderately common, and in the Kimberley Storr (1980) recorded it as very rare. Recent work in Cambridge Gulf (north-east Kimberley) has shown that the Mangrove Kingfisher is common in this area in *Rhizophora* forest, and mixed *Rhizophora-Sonneratia* forest and woodland.

Halcyon chloris pilbara subsp. nov.

Holotype

Adult female (WAM A16686), collected by R.E. Johnstone and L.A. Smith on 6 October 1980 at mouth of Popes Nose Creek 2 km SW of Point Samson, Western Australia.

Diagnosis

Differs from *Halcyon chloris sordida* in its smaller size (Table 1); narrower bill (Table 1); duller paler and more brownish head and back and narrower white collar (only one of sixteen specimens having a collar wider than 7 mm). See Figure 1.

Table 1 Measurements (mm) of *Halcyon chloris* with sample size and means in parentheses.

		Wing	Bill length	Bill depth	Tail	Tarsus	Total length	Weight	$\frac{\text{Bill}}{\text{Wing}}\%$
Pilbara W.A.	♂ (N10)	93-104 (98)	55.5-61.0 (58.1)	10.7-12.0 (11.4)	65-71 (67)	15-18 (15.5)	241-257 (249)	50-67 (59)	59.2
	♀ (N10)	91-103 (97)	54.0-60.5 (57.2)	11.0-12.0 (11.3)	65-71 (69)	15-17 (16.0)	225-256 (246)	54-70 (63)	58.9
West Kimberley W.A.	(N 4)	105-107 (106)	57.0-66.5 (61.6)	13.6-13.7 (13.6)	71-76 (73)	15-17 (16.0)	260, 268	70-87 (76)	58.1
Cambridge Gulf W.A.	(N 8)	100-105 (102)	55.0-58.5 (56.9)	11.7-13.3 (12.1)	66-74 (70)	15-17 (16.0)	250-270 (260)	61-92 (71)	55.7
Northern Territory	(N16)	98-106 (101)	54.0-62.0 (57.2)	12.5-14.0 (13.0)	64-72 (68)	14-19 (15.5)		57-90 (69)	56.6
Queensland	(N15)	97-114 (105)	49.0-59.0 (54.6)		63-70 (67)	14-19 (17.0)	242, 260, 266	62, 92	52.0
New Guinea	(N 2)	99, 109	55.0, 53.5	11.6	62, 70	15, 16	242	85	52.1
All <i>sordida</i>	(N45)	97-114 (103)	49.0-66.5 (56.7)	11.6-14.0 (12.7)	62-76 (69)	14-19 (16.0)	229-270 (256)	61-92 (71)	55.0

Description

Adult male: Head brown (some specimens tinged with olive); white loreal spot small to large, extending back in two specimens (a male and a female) as an ill-defined superciliary stripe; narrow white collar (Figure 1) separated from crown by narrow band of blackish-brown; back, scapulars and wing coverts pale olive-brown; outer web of flight feathers greenish-blue to bluish-green; rump and tail coverts olive-green; tail light greenish-blue; underparts white. Iris dark brown; bill black except for base of lower mandible, which is whitish; mouth pink; legs light grey to grey.

Adult female: Differing from male in having head brown; back, scapulars, wing coverts and rump dull olive-brown; outer web of flight feathers and tail dull greenish-blue.

Width of white collar 2-11 mm (mean 4.6 mm) *pilbara*, compared to 9-13 mm (mean 10.9 mm) in Kimberley *sordida*.

Distribution

Coastal Pilbara, Western Australia, from the mouth of the Turner River south to Exmouth Gulf (see Figure 2). Separated from *H. c. sordida* by the Eighty Mile Beach, which is almost devoid of mangroves.

Status

Moderately common to common. Confined to blocks of mangal with *Avicennia marina* forest or woodland. *Avicennia marina* is the only mangrove in this region large enough to produce nesting hollows not inundated by tides. When feeding they will often move into other mangrove habitats, including *Rhizophora* forest and woodland and mixed *Rhizophora-Avicennia* forest and woodland.

Voice

High-pitched 'ek ek' or 'kick it' rising in pitch on the second syllable. Churring 'keer' calls are also made.

Breeding

Most specimens collected in October 1980 and October 1982 had enlarged gonads. On 12 October 1980 a nest was found 38 cm down a hollow log wedged across branches of *Avicennia marina* at the mouth of the Cane River. The hollow was 10 cm wide, and the entrance was 2 m above the ground. A male bird was flushed from the nest and returned within a few minutes. The nest contained three pure white, slightly glossy eggs; they measured 32.0 x 25.3 mm, 30.9 x 24.9 mm and 30.5 x 25.6 mm.

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References

- Condon, H.T. (1975). *Checklist of the Birds of Australia. Part I. Non-passerines*. Melbourne: RAOU.
- Keast, A. (1957). Variation in the Australian Kingfishers (Aves: Alcedinidae). *Rec. Aust. Mus.* **24**: 61-72.
- McKenzie, N.L., and Rolfe, J.K. (1979). A further Mangrove Kingfisher record from Western Australia. *West. Aust. Nat.* **14**: 159.
- Montague, P.E. (1914). A report on the Fauna of the Monte Bello Islands. *Proc. Zool. Soc. Lond.* 1914: 625-652.
- Morris, A.K., McGill, A.R. and Holmes, G. (1981). Handlist of birds in New South Wales. New South Wales Field Ornithologists Club. Sydney.
- Peters, J.L. (1960). *Checklist of birds of the World*, Vol. 5. Cambridge, Mass.: Mus. Comp. Zool.
- Storr, G.M. (1977). Birds of the Northern Territory. *West. Aust. Mus. Spec. Publs* No. 7.
- Storr, G.M. (1980). Birds of the Kimberley Division, Western Australia. *West. Aust. Mus. Spec. Publs* No. 11.
- Storr, G.M. (In press). Revised list of Queensland birds. *Rec. West. Aust. Mus.*